EQUIPMENT TEST LIST

REGULATORS

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1. GENERAL

1.01 This section provides an index and information access system to locate the standard tests applicable to equipment listed in the preceding table of contents. Test classification and frequency of periodic routine are also provided.

1.02 This Equipment Test List (ETL) is reissued to incorporate changes which are indicated by an arrow to the left of each line which has been changed.

1.03 Comments on this section should be made by following the instructions in Bell System Practices (BSP), Section 000-010-015.

1.04 Routine test information is arranged in the following order from left to right: Section number, issue/addendum, test letter or paragraph number, test title, test class, frequency, and the last space is for a locally assigned job number.

1.05 Section 010-300-011 provides Equipment Test List instructions.

NOTICE
Not for use or disclosure outside the
Bell System except under written agreement

3.0 REGULATORS

3.1 REGULATORS; 100A E/W KS-5511 MOTOR

SELECT ONLY ONE CATEGORY

KS-5511 MOTOR (TYPE 892B)

024-405-701	(2/0)	2.06	CHECK INDICATING WHEEL SETTING	MW 12M	_____

KS-5511 MOTOR (TYPE 892C)

024-405-702	(2/0)	2.07	CHECK INDICATING WHEEL SETTING	MW 12M	_____

KS-5511 MOTOR (TYPE 892D OR RECOND 892C)

024-405-703	(4/0)	2.02	LUBRICATE MOTOR BEARINGS	MW 60M	_____
		2.09	CHECK INDICATING WHEEL SETTING	MW 12M	_____

TROUBLE TESTS

KS-5511 MOTOR (TYPE 892B)

024-405-701	(2/0)	2.01	CLEANING	TT	_____
		2.02	MOTOR BRUSH SPRING PRESSURE	TT	_____
		2.03	MOTOR MOVEMENT	TT	_____
		2.04	POSITION OF LATCH	TT	_____
		2.05	CONDENSER TORQUE	TT	_____
		2.07	GEAR BIND & BACK LASH	TT	_____

KS-5511 MOTOR (TYPE 892C)

024-405-702	(3/0)	2.01	CLEANING	TT	_____
		2.02	TOP MOTOR BRUSH SPRING PRESSURE	TT	_____
		2.03	MOTOR SHAFT END PLAY AND BOTTOM MOTOR BRUSH SPRING FOLLOW	TT	_____
		2.04	MOTOR MOVEMENT	TT	_____
		2.05	POSITION OF LATCH	TT	_____
		2.06	CONDENSER TORQUE	TT	_____
		2.08	GEAR BIND AND BACK LASH	TT	_____

KS-5511 MOTOR (TYPE 892D OR RECOND 892C)

024-405-703	(4/0)	2.01	CLEANING	TT	_____
		2.03	TOP MOTOR BRUSH SPRING PRESSURE	TT	_____
		2.04	BOTTOM MOTOR BRUSH SPRING PRESSURE	TT	_____
		2.05	MOTOR MOVEMENT	TT	_____
		2.06	POSITION OF LATCH	TT	_____
		2.07	TRACKING, GEAR BIND & BACKLASH	TT	_____
		2.08	CAPACITOR TORQUE	TT	_____

3.2 REGULATORS; KS-2749

FOR ALL UNITS

024-408-701	(3/1)	2.01	(A) CLEAN MOTOR & ASSOCD SPRING CONTACTS	MW 12M	_____
		2.01	(B) CLEAN & LUBRICATE PEN CRG ROD	MW 12M	_____
		2.01	(C) CLEAN & LUBRICATE SLIDE WIRE	MW 12M	_____
		2.01	(D) CLEAN & REFILL PEN (OR AS REQD)	MW 3M	_____

024-408-701 (3/1)	2.01	(E) CLEAN DIAL SWITCH CONTACTS	MW 12M	_____
	2.02	(A) LUBRICATE MOTOR BALL BEARING GREASE CUPS	MW 3M	_____
	2.02	(B) LUBRICATE SHAFT BEARINGS, SOCKET & PIVOT BEARINGS, WORM & GEAR DRIVES, AND CAM BEARING SURFACES (OR EVERY 336 HRS CONTS OPRN)	MW 12M	_____
	2.04	CHECK MOUNTING	MW 12M	_____
	2.08	CHECK LEVER ARMS	MW 12M	_____
	2.09	CHECK OVERSTEP ALARM OPRG	MW 12M	_____
	2.16	CHECK LIMITING POSITION ALARM OPRG	MW 12M	_____
	2.20	CHECK SIZE OF BITE	MW 12M	_____
	2.21	CHECK DRIFT	MW 12M	_____
	2.22	CHECK HUNTING	MW 12M	_____
	2.23	CHECK DIFFERENTIAL RELAY ALARM OPRG	MW 12M	_____
	2.24	CHECK NO-VOLTAGE ALARM OPRG	MW 12M	_____
	2.25	CHECK DIAL SWITCH CONTACT ALARM OPRG	MW 12M	_____
TROUBLE TESTS				
024-408-701 (3/1)	2.05	GALVANOMETER COIL POSITION, SUSPENSION TENSION, BALANCE, CLAMPING NUT, POINTER & ZERO ADJMT	TT	_____
	2.06	CAM/SHAFT TIGHTNESS	TT	_____
	2.07	CLUTCH ARM, DISC & CORKS	TT	_____
	2.10	MOTOR	TT	_____
	2.11	REDUCTION GEARS	TT	_____
	2.12	DIAL SWITCH	TT	_____
	2.13	SLIDE WIRE	TT	_____
	2.15	BRIDGE BALANCE	TT	_____
	2.17	PEN CARRIAGE	TT	_____
	2.18	BRIDGE POTENTIAL	TT	_____
	2.19	POINTER LAG	TT	_____
3.3 REGULATORS; J2 CARRIER FOR ALL UNITS				
024-410-701 (3/0)	2.01	(A) LUBRICATE TELECHRON MOTORS	MW 24M	_____
	2.01	(B) LUBRICATE DRIVE MECHANISM	MW 12M	_____
	2.04	CHECK DIAL RIBBON POSITION	MW 6M	_____
	2.05	CHECK STOP RING POSITION	MW 6M	_____
	2.06	CHECK RELATION BETWEEN CONDENSER PLATES & DIAL SETTING	MW 12M	_____
	2.07	CHECK STOP SPRING POSITION	MW 6M	_____
	2.08	CHECK TIGHTNESS OF AUX SHAFT GEAR & COUNTER SHAFT IDLER GEAR	MW 12M	_____
	2.09	CHECK TIGHTNESS OF FLEX COUPLING ON AUX SHAFT	MW 12M	_____
	2.10	CHECK SLOPE & FLAT DIAL BACKLASH & GEAR BIND	MW 12M	_____
	2.11	CHECK MOTOR WORM SHAFT ENDPLAY	MW 12M	_____

024-410-701 (3/0)	2.12	CHECK CLEARANCE BETWEEN MULTIJAW COUPLING SECTIONS	MW	12M	_____

3.4 REGULATORS; 101 & 102-TYPE

FOR ALL UNITS

024-406-701 (3/0)	2.03	CHECK CLUTCH PIN REQMT	MW	12M	_____
	2.05	CHECK REGULATOR ROLLER ARM ROLLER REQD	MW	12M	_____
	2.07	CHECK ROLLER ARM/STUD CLRNC	MW	12M	_____
	2.12	CHECK MOTOR BRUSH LENGTH	MW	12M	_____

OPTIONAL FEATURES

101-TYPE

024-406-701 (3/0)	2.09	(B) CHECK CTRG OF ROLLERS & INDICATOR ADJMT	MW	12M	_____

102-TYPE

024-406-701 (3/0)	2.09	(A) CHECK CTRG OF ROLLERS & INDICATOR ADJMT	MW	12M	_____

TROUBLE TESTS

024-406-701 (3/0)	2.01	REGULATOR CONTACTS CLEANING	TT		_____
	2.04	ASSEMBLY TIGHTNESS	TT		_____
	2.06	CONTACT SPRING CLRNC	TT		_____
	2.08	ROLLER ARM TENSION	TT		_____
	2.10	DRIVING MECH FREEDOM MVMT	TT		_____
	2.11	MASTER CONTROLLER & DRIVE UNIT ALNMT	TT		_____
	2.13	MOTOR BRUSH PRESSURE	TT		_____

3.5 REGULATORS; J86246A & J86246B

FOR ALL UNITS

024-443-301 (3/0)	4.01	(A) CHECK 20 HZ OUTPUT VOLTAGE	MW	12M	_____
	4.01	(B) CHECK PLT CUR READING	MW	12M	_____
	4.01	(C) CHECK T & T1 TRANSFORMER SECONDARY VOLTAGES	MW	12M	_____
	4.01	(D) CHECK ELECTRON TUBES	MW	12M	_____

3.6 REGULATORS; J86727E

FOR ALL UNITS

024-447-301 (1/0)	3.01	CHECK RINGING VOLTAGE	MW	M	_____
	3.02	CHECK RINGING TRANSFER CKT	MW	6M	_____
	3.03	CHECK HIGH VOLTAGE TRANSFER CKT ADJMT	MW	6M	_____

3.7 REGULATORS; J87324A

FOR ALL UNITS

024-449-301 (2/0)	4.02	CHECK VOLTAGE ALARM CIRCUIT	MW	12M	_____

TROUBLE TESTS

024-449-301 (2/0)	4.01	(A) POSITIVE OUTPUT ADJMT	TT		_____
	4.01	(B) NEGATIVE OUTPUT VOLTAGE ADJMT	TT		_____

3.8 REGULATORS; KS-5016, KS-5117 & KS-5468

FOR ALL UNITS

024-460-701 (4/0)	2.01	(B) LUBRICATE RHEOSTAT DRIVE MOTOR BEARING WICK OILERS	MW	6M	_____

024-460-701	(4/0)	2.01	(C) CLEAN & REFILL RHEOSTAT DRIVE MOTOR BEARING WICK OILERS	MW 24M	_____
		2.01	(D) LUBRICATE MOTOR-DRIVEN RHEOSTAT GREASE CUPS	MW 3M	_____
		2.01	(E) LUBRICATE EXPOSED GEARS	MW M	_____
		2.01	(F) LUBRICATE RHEOSTAT CONTACTS	MW M	_____
		2.03	CHECK RHEOSTAT DRIVE MOTOR BRUSH LENGTH	MW 12M	_____
		2.04	CHECK RHEOSTAT DRIVE MOTOR BRUSH FIT	MW 12M	_____
		2.05	CHECK CONDITION OF COMMUTATOR SURFACES	MW 12M	_____
		2.06	CHECK FREEDOM OF ROTATING PARTS	MW 6M	_____
		2.07	(2.07 - 2.09) CHECK RHEOSTAT MOTOR CONTACTORS OPRG	MW 12M	_____
		2.10	(2.10 - 2.12) CHECK RHEOSTAT CONTACTS	MW 12M	_____
		2.13	CHECK BACKLASH IN RHEOSTAT GEARING & CONTACT ARM	MW 12M	_____
		2.14	CHECK RHEOSTAT LIMIT SWITCH CLOSURE	MW 12M	_____
TROUBLE TESTS					
024-460-701	(4/0)	2.02	RHEOSTAT DRIVE MOTOR BRUSH HOLDER CLRNC	TT	_____
		2.15	OPRG SEQUENCE	TT	_____
		2.16	TEMPERATURE LIMITS	TT	_____
		2.17	GENERATOR FIELD RHEOSTAT SETTING	TT	_____
3.9 REGULATORS; CENTRIFUGAL TYPE-AUTOMATIC					
FOR ALL UNITS					
024-462-701	(9/0)	2.01	(A) LUBRICATE MOTOR BEARINGS	MW 6M	_____
		2.01	(B) CLEAN & REPACK MOTOR BEARINGS	MW 36M	_____
		2.03	CHECK OUTPUT VOLTAGE	MW 12M	_____
		2.06	CHECK FREEDOM OF ROTATING PARTS	MW 12M	_____
		2.09	CHECK MOTOR & COLLECTOR RING BRUSH LENGTH	MW 12M	_____
		2.10	CHECK MOTOR & COLLECTOR RING BRUSH FIT	MW 12M	_____
		2.11	CHECK MOTOR & COLLECTOR RING BRUSH PRESSURE	MW 12M	_____
		2.17	CHECK MOTOR NOISE & VIBRATION	MW 6M	_____
		2.18	(A) CHECK TEMPERATURE	MW 6M	_____
OPTIONAL FEATURES					
MOTORS E/W SEALED BEARINGS					
024-462-701	(9/0)	2.01	(C) CHECK BEARINGS FOR NOISE	MW 12M	_____
REGULATORS E/W KS-5293 OR KS-5293-01 MOTORS					
024-462-701	(9/0)	2.19	REPLACE BALLAST LAMP	MW 12M	_____
REGULATORS E/W DC GENERATORS					
024-462-701	(9/0)	2.20	(B) CHECK NO-LOAD & FULL-LOAD PERCENT CONTACT OPRN	MW 12M	_____
TROUBLE TESTS					
024-462-701	(9/0)	2.02	SPEED & ROTATION	TT	_____
		2.04	COND OF BEARINGS	TT	_____

024-462-701 (9/0)	2.05	MOTOR ARMATURE END PLAY	TT	_____
	2.07	ARMATURE & POLE FACE AIR GAP	TT	_____
	2.08	BRUSH HOLDERS	TT	_____
	2.12	CUMMUTATOR & COLLECTOR RING SURFACES	TT	_____
	2.13	COMMUTATION	TT	_____
	2.14	ROTATING CONTACT POLARITY	TT	_____
	2.15	CONTACT LENGTH	TT	_____
	2.16	(2.16.1) MOVABLE CONTACT ECCENTRICITY	TT	_____
	2.16	CONTACT SURFACES	TT	_____
	2.18	(B) TEMPERATURE	TT	_____

REGULATORS E/W AC GENERATOR & MKD RHEOSTAT

024-462-701 (9/0)	2.18	(A) NO-LOAD & FULL LOAD PERCENT CONTACT OPRN	TT	_____

3.10 REGULATORS; KS-5580 (ELECTRONIC TYPE GVD)

FOR ALL UNITS

024-464-301 (2/0)	2.04	CHECK VOLTAGE & CURRENT RHEOSTAT ADJUSTMENT	MW 12M	_____
	2.05	REPLACE GRID BATTERIES	MW 12M	_____
	2.06	CHECK TRANSFORMER PRIMARY VOLTAGE TAP CONNECTIONS	MW 12M	_____
	2.07	CHECK CEMF MOTOR BRUSHES	MW 12M	_____
	2.08	LUBRICATE BALL BEARINGS	MW 60M	_____
	2.09	CHECK CONDITION OF COMMUTATOR SURFACES	MW 12M	_____

3.11 REGULATORS; GE TYPE TA, FORM B2

FOR ALL UNITS

024-480-701 (2/0)	2.01	CHECK VOLTAGE REGULATION	MW 12M	_____
	2.02	CHECK PIVOT BEARING, MAGNET COIL MOVABLE CORE & DASHPOTS LARGE PISTON FREEDOM OF OPERATION	MW 12M	_____
	2.03	(A) CLEAN DASHPOT	MW 12M	_____
	2.03	(B) CHECK DASHPOT OIL CUSHIONING	MW 12M	_____
	2.03	(C) CHANGE DASHPOT OIL	MW 36M	_____
	2.03	(D & E) AIR CUSHIONING	MW 6M	_____
	2.04	CHECK CONDITION OF MAIN CONTACT SURFACES	MW 6M	_____
	2.05	CHECK MAIN CONTACT ADJMT & ALNMT	MW 6M	_____
	2.06	CHECK MAGNET COIL MOVABLE CORE ADJMT	MW 12M	_____

3.12 REGULATORS; GE TYPE TA-125, FORM L

FOR ALL UNITS

024-481-701 (2/0)	2.01	CHECK VOLTAGE REGULATION	MW 12M	_____
	2.02	CHECK FREEDOM OF OPERATION	MW 12M	_____
	2.03	CHECK DASHPOT OIL CONDITION	MW 12M	_____
	2.04	CHECK MAIN & RELAY CONTACT SURFACES	MW 12M	_____
	2.05	CHECK MAIN CONTACTS ADJMT & ALNMT	MW 12M	_____
	2.06	CHECK DC MAGNETS MOVABLE CORE & MULTIPLE SPRINGS ADJMT	MW 12M	_____

024-481-701	(2/0)	2.07	CHECK AC MAGNETS MOVABLE CORE, UPPER LIMIT STOP & LOWER LIMIT STOP ADJMT	MW 12M	_____
		2.08	CHECK RELAY	MW 12M	_____
TROUBLE TESTS					
024-481-301	(1/0)	3.01	AC VOLTAGE FAILS TO BUILD UP	TT	_____
		3.02	AC VOLTAGE FALLS	TT	_____
		3.03	AC VOLTAGE FLUCTUATES	TT	_____
		3.04	AC VOLTAGE INCORRECT VALUE	TT	_____
		3.05	RELAY CONTACT ARCING	TT	_____

3.13 REGULATORS; CARBON TILTING PILE TYPE GDA-1M, GDA-30 & GDD-1M

SELECT ONLY ONE CATEGORY

AC REGULATOR GDA-1M

024-482-701	(4/0)	2.02	(A) CHECK AC REGULATOR OPRN	MW 12M	_____

AC REGULATOR GDA-30

024-482-701	(4/0)	2.02	(A) CHECK AC REGULATOR OPRN	MW 12M	_____
		2.03	CLEAN DUST FILTER	MW 12M	_____

DC REGULATOR GDD-1M

024-482-701	(4/0)	2.02	(B - D) CHECK DC REGULATOR OPRN	MW 12M	_____

TROUBLE TESTS

024-482-701	(4/0)	2.01	ARMATURE POSITION	TT	_____

3.14 REGULATORS; WESTINGHOUSE TYPE UV-AG

FOR ALL UNITS

024-485-301	(1/0)	1.04	CLEAN CONTACT SURFACES	MW 12M	_____
		2.03	REPL DASHPOT OIL	MW 12M	_____

3.15 REGULATORS; J86215A & KS-5695

FOR ALL UNITS

024-440-301	(2/0)	2.03	(B) CHECK OUTPUT VOLTAGE	MW 12M	_____
		2.03	(D) CHECK VARISTORS OUTPUT VOLTAGES	MW 12M	_____

3.16 REGULATORS; J86223

FOR ALL UNITS

024-442-301	(1/0)	3.01	CHECK VACUUM TUBES	MW 12M	_____

TROUBLE TESTS

024-442-301	(1/0)	4.01	AC OUTPUT VOLTAGE NOT ADJBL	TT	_____
		4.04	TROUBLE CHART	TT	_____
		5.01	(5.01 - 5.06) POINT-TO-POINT VOLTAGES	TT	_____

3.17 REGULATORS; J86250A

FOR ALL UNITS

024-445-301	(5/0)	4.03	CHECK ELECTRON TUBES	MW 12M	_____

TROUBLE TESTS

024-445-301	(5/0)	4.05	(4.05 - 4.06) SELENIUM RECTIFIER STACKS	TT	_____
		4.07	SILICON DIODES	TT	_____

024-445-301 (5/0)	4.09	TROUBLE CHARTS	TT		-----
	4.10	(4.10 - 4.14) TROUBLE ANALYSIS	TT		-----
	5.01	POINT-TO-POINT VOLTAGES	TT		-----

3.18 REGULATORS; KS-5650

FOR ALL UNITS

024-465-301 (2/0)	2.04	OUTPUT VOLTAGE ADJMT (OR UPON SHIFTING FROM ONE VOLTAGE TO ANOTHER)	MW	12M	-----
	3.01	CHECK ELECTRON TUBES	MW	12M	-----

TROUBLE TESTS

024-465-301 (2/0)	4.01	TROUBLE CHART	TT		-----
	4.08	SHORT LIFE OF ELECTRON TUBES	TT		-----
	5.01	(5.01 - 5.04) POINT-TO-POINT VOLTAGES	TT		-----

3.19 REGULATOR; KS-5655

FOR ALL UNITS

024-466-301 (3/0)	3.01	CHECK VACUUM TUBES	MW	12M	-----

TROUBLE TESTS

024-466-301 (3/0)	4.01	TROUBLE CHART	TT		-----
	5.01	(5.01 - 5.04) POINT-TO-POINT VOLTAGES	TT		-----

3.20 REGULATOR; KS-15508

FOR ALL UNITS

024-470-301 (2/0)	2.13	CHECK OUTPUT VOLTAGE ADJMT	MW	12M	-----

TROUBLE TESTS

024-470-301 (2/0)	2.14	BU1 ELEMENT	TT		-----
	2.15	THYRATRON TUBES	TT		-----
	2.16	RELAYS	TT		-----
	2.17	SENSITIVITY & OUTPUT VOLTAGE CONTROLS	TT		-----
	2.18	CONTROL UNIT	TT		-----
	2.19	MOTOR	TT		-----
	3.01	TROUBLE CHART	TT		-----

3.21 REGULATORS; KS-15908 L1 & L2

FOR ALL UNITS

024-471-301 (1/0)	5.01	CHECK GLOW-TYPE LAMPS ASSOCIATED WITH FUSES F4 - F7	MW	6M	-----
	5.02	CHECK OUTPUT VOLTAGE ADJMT	MW	12M	-----

TROUBLE TESTS

024-471-301 (1/0)	6.01	TROUBLE CHART	TT		-----

3.22 REGULATORS; KS-20618

TROUBLE TESTS

024-490-301 (3/0)	4.01	(4.01 - 4.05) TROUBLESHOOTING PROCEDURES	TT		-----